

Abstract

Curable compositions comprising degradable macromonomers having one or more terminal acrylate or methacrylate functionality, a curing composition, a filler composition comprising bioactive particles of bioactive glass, bioactive glass-ceramics, calcium phosphates, calcium apatites, or mixtures thereof and optionally one or more polymerizable acrylate or methacrylate comonomers. Degradable macromonomers are manufactured from cyclic monomers with compounds having acrylate or methacrylate functionality. Depending on their use, the degradable macromonomer compositions further comprise one or more organic or inorganic fillers, including a calcium-based compound and/or a radiopacity-imparting agent. The compositions are particularly suitable for root canal sealants, implants, bone cements, and pulp capping materials.